

IN THE SPECIFICATION:

At page 123, line 1, please delete ~~ABSTRACT OF THE INVENTION~~ and replace

ABSTRACT OF THE DISCLOSURE therefore.

Please replace the paragraph starting at page 13, line 29 and continuing to page 14, line 8.

FIGURE 8. Assay for eEF-2 kinase activity. Recombinant eEF-2 kinase (2  $\mu$ g) was incubated with increasing concentrations of a peptide phosphorylation target (RKKGESEKTKTKEFL) (SEQ ID NO:20) in a buffer consisting of 12.5 mM Hepes-KOH (pH 7.4), 2.5 mM magnesium acetate, 1.25 mM DTT, 25  $\mu$ M  $\text{CaCl}_2$ , 0.5  $\mu$ g calmodulin, 100  $\mu$ M ATP, and 0.5  $\mu$ Ci [ $\text{g-}^{33}\text{P}$ ]ATP in a total volume of 50  $\mu$ l. Samples were incubated at 30°C and aliquots were withdrawn at various time points, and the reaction was terminated by incubation in an ice water bath. The aliquots were then spotted onto phosphocellulose paper (2 cm x 2 cm) and washed (4 x 4 min) with 75 mM phosphoric acid. The papers were then rinsed with 100% ethanol, dried, and then counted in a scintillation counter.

Please replace the paragraph starting at page 44, line 9 and continuing to line 24.

Recently, eEF-2 kinase from rabbit reticulocyte lysate was purified to near homogeneity (Hait et al., (1996)). This enabled determination of its partial amino acid sequence (see EXAMPLE 1). Two peptide sequences (LTPQAFSHFTFER (SEQ ID NO:21) and LANXYYEKAE (SEQ ID NO:22)) were compared with entries in a nonredundant database using the National Center for Biotechnology Information BLAST program (Altschul et al., (1990) *J. Mol. Biol.* 215:403-410). Matches were found with a *C. elegans* hypothetical protein (F42A10.4; GenBank accession number U10414). This sequence was obtained from the *C. elegans* genome sequencing project and is located on chromosome III (Wilson et al., (1994) *Nature* 368:32-38). The 100% identity between the sequenced peptides and the *C. elegans* protein, as well as the fact that the predicted molecular weight of the *C. elegans* protein is similar to that of eEF-2 kinase, suggested that this

D<sup>3</sup> gene encoded eEF-2 kinase. We cloned the full-length cDNA by RT-PCR using *C. elegans* total RNA. Several clones were isolated and sequenced. *Cefk-1* has six of the predicted exons and encodes 768 amino acids. *Cefk-2* represents an alternatively spliced form that has five exons; it is missing amino acids 625-632 that correspond to exon four.

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D<sup>4</sup> **eEF-2 Kinase Activity Assay Using a 16-Amino Acid Peptide Derived from Myosin Heavy Chain as the Phosphorylation Target.** We found that 16' mer peptide, RKKFGESEKTKTKEFL (SEQ ID NO:20), can serve as a good substrate for eEF-2 kinase. (Note: circular dichroism measurements (data not shown) indicated that this peptide is in an  $\alpha$ -helical structure, and that amidation of the peptide further stabilizes the  $\alpha$ -helical structure, resulting in stronger phosphoacceptor activity.) Since recombinant eEF-2 is impossible to overexpress, as discussed *supra*, and large amounts of the protein are required to for large scale screening assays, the discovery of a peptide (easily synthesized on a large scale) that exhibits the same phosphoacceptor activity as eEF-2 was the critical breakthrough that allows for the development of a variety of automated high throughput screening assays for screening drug candidates.

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